REMARKS

This is in response to the *Advisory* Office Action of August 18, 2008, where the Examiner has rejected claims 1-45. By the present amendment, applicant has amended claims 1, 12, 22 and 28, and cancelled claims 2, 13, 23 and 29. After the present amendment, claims 1, 3-12, 14-22, 24-28 and 30-45 remain pending in the present application. Reconsideration and allowance of outstanding claims 1, 3-12, 14-22, 24-28 and 30-45 in view of the following remarks are requested.

A. **Rejection of Claims 1-10, 12-20, 22-26, 28-32 and 34-45 under 35 USC §102(b)**

The Examiner has rejected claims 1-10, 12-20, 22-26, 28-32 and 34-45, under 35 USC §102(b), as being anticipated by Kroon (USPN 5,664,055) ("Kroon").

In the Advisory Action, the Examiner states that applicant argues that ... "the periodicity classification is determined at the decoder, not at the encoder." In response, the Examiner "points out that Kroon performs periodicity classification at the encoder ...." Applicant respectfully submits that the Advisory Action misses the point of applicant's response to the final office action. Applicant is not arguing that the encoder does not determine the degree of periodicity of the speech signal. Rather, applicant respectfully submits that the encoder of Kroon does not transmit a voicing index indicative of one of a plurality of classes of said input speech signal, wherein each of said plurality of classes of said input speech signal represents a different degree of periodicity of said input speech signal. Applicant respectfully submits that if Kroon's encoder transmits a voicing index, as defined in claim 1, there is no reason for Kroon's decoder

03M0004/US

to do calculations for classifying the speech signal again, as Kroon's decoder would simply use the voicing index received from the encoder.

At col. 30, lines 55-65, Kroon discusses the concealment of frame erasures and parity errors, and states that "If the last correctly received frame was classified as periodic, the current frame is considered to be periodic as well." However, contrary to the Examiner's conclusion that this statement indicates that the received frame from the encoder includes a "classification" to show that it is periodic; col. 30, lines 1-18 of Kroon, as quoted below, clearly shows that the classification is determined at the decoder. _It goes without saying that if the received frame from the encoder, in Kroon, did include a classification index, as alleged by the Examiner, there would be no need for the decoder of Kroon to perform classification_, as described at col. 30, lines 1-18:

> The concealment strategy has to reconstruct the current frame, based on previously received information. The method used replaces the missing excitation signal with one of similar characteristics, while gradually decaying its energy. This is done by using a voicing classifier based on the long-term prediction gain, which is computed as part of the long-term postfilter analysis. The pitch postfilter (**see Subsection II.4.2.1**) finds the long-term predictor for which the prediction gain is more than 3 dB. This is done by setting a threshold of 0.5 on the normalized correlation R'(k) (Eq. (81)). For the error concealment process, these frames will be classified as periodic. Otherwise the frame is declared nonperiodic. An erased frame inherits its class from the preceding (reconstructed) speech frame. Note that the voicing classification is continuously updated based on this reconstructed speech signal. Hence, for many consecutive erased frames the classification might change. Typically, this only happens if the original classification was periodic. (emphasis added.)

The Examiner should note that Section 4 of Kroon describes "Functional Description of the Decoder," and Section 4.2.1 describes "Pitch Posfilter" for the decoder of Kroon. Therefore, it is respectfully submitted that the decoder of Kroon classifies the speech signal, and the

03M0004/US

disclosure at col. 30, 55-65, which has been relied upon by the Examiner to reject claim 1, as amended, in fact, teaches away from the invention of claim 1 *by showing that the decoder classification is not based on a classification index received from the encoder*.

In addition, applicant respectfully submits that Kroon fails to disclose new elements of claim 1, as amended, which recites "classes of said input speech signal include a background noise class, an unvoiced class, a first voiced class, a second voiced class, wherein said first voiced class has a lower degree of periodicity than said second voiced class." The Examiner has relied upon the disclosure at col. 30, 55-65, in Kroon, which shows that the decoder performs the classification, and the error concealment section of Kroon does not use a classification index from the encoder, but the error concealment section of Kroon uses the classification information derived in Subsection II.4.2.1 of the decoder in Kroon. Therefore, Kroon fails to disclose, teach or suggest that its encoder transmits a voicing indexes that is indicative of one of a plurality of classes, where the classes of the input speech signal indicated by the voicing index include a background noise class, an unvoiced class, a first voiced class, a second voiced class, wherein said first voiced class has a lower degree of periodicity than said second voiced class.

Lastly, it is respectfully submitted that the final Office Action merely cites "(index; column 1, lines 22-26, col. 3, lines 17-25, and column 30, lines 55-65)," next to the limitations "creating a plurality of voicing indexes by said encoder, wherein each of said plurality of voicing indexes is indicative of one of a plurality of classes of said input speech signal, wherein each of said plurality of classes of said input speech signal represents a different degree of periodicity of said input speech signal." Applicant respectfully submits that the "index" referenced at column 1, lines 43-64 of Kroon is simply an index to the fixed codebook, and not for providing speech

03M0004/US

classification information, including <u>a background noise class, an unvoiced class, a first voiced class, a second voiced class, wherein said first voiced class has a lower degree of periodicity than said second voiced class</u>. Therefore, claim 1 is patentably distinguishable over the "index" referenced in Kroon.

Accordingly, for the reasons stated above, it is respectfully submitted that claim 1, as amended, is patentable over Kroon. In addition, independent claims 12, 22 and 28 include limitations similar to those of claim 1, as amended, and should be allowed for the same reasons stated above. Further, claims 3-10, 14-20, 24-26, 30-32 and 34-45 depend from claims 1, 12, 22 and 28, respectively, and should be allowed at least for the reasons stated above.

B.   Rejection of Claims 11, 21, 27 and 33 under 35 USC §103(a)

The Examiner has rejected claims 11, 21, 27 and 33, under 35 USC §103(a), as being unpatentable over Kroon in view of Morii, et al. (PGPUB 2006/0206317) ("Morii").

Applicant respectfully submits that claims 11, 21, 27 and 33 depend from claims 1, 12, 22 and 28, respectively, and should be allowed at least for the reasons stated above.

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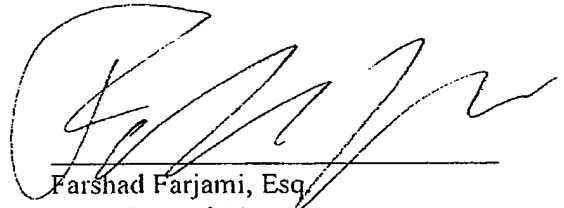
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C. Conclusion

Based on the foregoing reasons, an early Notice of Allowance directed to all claims 1, 3-

12, 14-22, 24-28 and 30-45 pending in the present application is respectfully requested.

Respectfully Submitted,
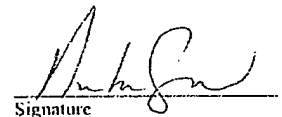FARJAMI & FARJAMI LLP

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